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MOHAWK UPLANDS AREA, MASSENA, NY

PDI WORK PLAN

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MOHAWK UPLANDS AREA, MASSENA, NY
PDI WORK PLAN

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Description	**This Work Plan describes the proposed pre-design investigation activities in connection with the Mohawk Uplands Area in Massena NY.**

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1. INTRODUCTION

This Work Plan, developed by Ramboll Americas Engineering Solutions, Inc. on behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust, describes the proposed pre-design investigation (PDI) activities in connection with the Mohawk Uplands Area (Study Area) located east of the General Motors Central Foundry Site (Site) in the vicinity of Turtle Creek and Turtle Creek Pond. The activities proposed in this PDI Work Plan are envisioned to be necessary for the completion of design efforts related to remedial activities in the Study Area.

The Study Area is located on Saint Regis Mohawk Reservation Land, immediately adjacent to and east of the Site. The Study Area includes Saint Regis Mohawk Tribe lots #47, 48, 50, and 61 displayed on **Figure 1**. This area is part of Operable Unit 1 (OU1) of the Site. Polychlorinated biphenyls (PCBs) have been detected in soil in this area. The 1990 Record of Decision (ROD) for OU1 of the Site called for excavation of soil exhibiting PCB concentrations greater than 1 milligram per kilogram (mg/kg) and sediments exhibiting PCB concentrations greater than 0.1 mg/kg. Excavated soils and sediments were to be treated and/or disposed. A subsequent 1999 Amendment to the 1990 OU1 ROD modified the remedy to allow for off-site disposal of these excavated materials.

The objective of this PDI is to supplement existing data for use in the remedial design. This new data will be combined with the historic data to help define the horizontal and vertical extents of soil and sediment to be remediated in this area.

The following presents Study Area background information followed by the sampling strategy and scope developed to further identify the extent of PCB containing soil in accordance with the above objective. The proposed sample locations for 2020 are identified on attached **Figure 1**. A Quality Assurance Project Plan (QAPP) Addendum will be prepared separately to supplement the 1993 QAPP (BBL Environmental Services, Inc. [BBLES] and Hughes Environmental Systems 1993) and subsequent QAPP updates (Arcadis 2010, 2016, 2019).

2. STUDY AREA BACKGROUND

As summarized in the *2006 Mohawk Upland Area Soils and Sediment Sampling Plan* (BBLES 2006), PCBs are the primary constituent of concern in soil and are believed to have reached the southern portion of the area as a result of a breach in a berm for an on-Site impoundment area known as the East Disposal Area that resulted in PCB contamination east of the berm. Based on discussions with USEPA, the current understanding is that this resulted in flow of potential PCB-containing materials to surficial soils in certain areas east of the Site and to shallow sediment within Turtle Creek Pond.

The *2006 Mohawk Upland Area Soils and Sediment Sampling Plan* (BBLES 2006) also indicated that fill material generated as part of a plant expansion was reportedly placed on the northern end of the Study Area. Based on discussions with RACER Trust and USEPA, the current understanding is that this fill activity was likely limited to the northeast area

between the smaller pond located north of Turtle Creek Pond and the Study Area western boundary.

Based on conversations with USEPA, observations during remediation activities in the Cove Area revealed that the fill material is anticipated to resemble construction debris mixed with soil and overlain by topsoil. A vegetative layer is reportedly present at the contact with underlying native materials.

Native material in the Study Area is expected to be a sandy glacial till containing varying amounts of gravel and cobbles. A shallow clay layer may be present in some areas.

Shallow soil and sediment investigations for the Mohawk Upland areas were performed during three investigations conducted in 1985 through 1987, 1993, and 2006. The analytical results from these sampling events are presented in the *2006 Mohawk Upland Area Soils and Sediment Sampling Plan* (BBLES, 2006). The document shows total PCB concentrations (primarily Aroclor 1248) ranged from less than detection to 49 mg/kg in surficial soil in samples collected to maximum depths of 2 ft. Concentrations above 1 mg/kg have generally been limited to the 0 to 1 ft interval. Sediment concentrations ranged from less than detection to 48 mg/kg PCBs (BBLES 2006).

As documented in the *Mohawk Upland Remedial Action Completion Report* (BBLES 2008), two remedial actions have been completed for surficial soils and sediment on properties east of the Site. In 2004 through 2005 remediation of an area known as Turtle Cove was completed. The remedial footprint for the Turtle Cove area addressed the locations of the highest detections in soil and sediment samples. Later, in 2007, subsequent remedial efforts addressed additional locations to the east and south of Turtle Creek Pond. In each instance, remediation involved excavation of soils exhibiting PCBs greater than 1 mg/kg or sediment greater than 0.1 mg/kg (BBLES 2008).

3. PRE-DESIGN INVESTIGATION RATIONALE

Investigation of the Mohawk Upland area for the purpose of refining the extent of PCBs in soil and sediments for design efforts was last presented in an addendum to the *2006 Mohawk Upland Area Soils and Sediment Sampling Plan* (BBLES 2006). USEPA, the Saint Regis Mohawk Tribe Environmental Division and RACER Trust, with the concurrence of the property owners, have refined the scope of investigation. The agreed sampling locations are indicated on **Figure 1** and focus on further surficial soil sampling, focused deeper borings in one area, and sediment sampling within Turtle Creek Pond, Turtle Creek and a second pond located north of Turtle Creek Pond. The strategy for investigation is understood to be as follows:

Surficial Soil Sampling

- Surficial soil samples are proposed to be collected in the vicinity of Turtle Creek Pond to supplement historic samples collected to evaluate the extent of PCBs. Past sampling of 0 to 1-ft and 1 to 2-ft intervals has demonstrated that PCB detections above 1 mg/kg have generally been in the shallower (*i.e.,* the 0 to 1-ft) sample intervals. Sampling is proposed for the 0 to 1-ft and the 1 to 2-ft intervals.
- Surficial soil samples are proposed to be collected along the eastern side of Turtle Creek Pond because sampling specific to this area has not been conducted previously. The purpose of these samples is to confirm there are no PCB concentrations above the cleanup level in this area.

- Surficial soil samples are proposed to be collected along the western and northern side of Turtle Creek Pond to supplement prior sampling that has shown isolated locations with PCB concentrations in excess of the cleanup level (historic sample locations SM-6, SSMR-33 and SM-4). These additional samples are proposed to better bound the lateral extent at these isolated locations.
- Surficial soil samples are proposed to evaluate the lateral extent around one location found to exhibit soil concentrations greater than 1 mg/kg near the small pond north of Turtle Creek Pond (historic sample location S-333).

Subsurface Soil Sampling

- Subsurface soil samples are proposed to evaluate the presence of PCBs in fill materials believed to have been placed between the western edge of the Study Area and a small pond north of Turtle Creek Pond. Borings are proposed to be advanced through anticipated fill material in this area, with samples to be collected above, within, and beneath the fill material.
- Subsurface soil samples are also proposed to be collected along the westernmost Saint Regis Mohawk Reservation Land property boundary to respond to the SRMT request to evaluate whether the Industrial Landfill at the Site may be impacting subsurface soil in this area.

Sediment Sampling

- Samples are proposed at regular transects across Turtle Creek Pond. These samples will augment previously collected samples to characterize the extent of PCBs in sediment within the pond.
- Certain sediment samples are proposed proximate to the limited sediment locations in Turtle Creek Pond identified during prior sampling rounds, to better define the lateral extent of PCBs in sediment at concentrations greater than 0.1 mg/kg.
- One transect is proposed within the small pond north of Turtle Creek Pond to supplement prior samples and confirm no PCBs in excess of the cleanup level are present in sediments in this pond.
- One sample location within Turtle Creek and between the two ponds is proposed to evaluate whether sediment between the two ponds has concentrations of PCBs in excess of the cleanup level.
- One sample is proposed from the settling basin located southeast of the Cove Remediated Area.

4. SCOPE OF WORK

The following presents the scope of work describing the activities that will be completed to collect the information described above.

4.1 Surveying

Sample locations will be staked by a New York State Licensed surveyor prior to sample collection. In addition, the surveyor will collect at-grade elevation data for each sample location. The surveyor will also place a stake at the ends of each transect identified on **Figure 1** for the sediment samples.

A hand-held GPS Trimble® Unit will be used to record the locations of sediment samples as they are collected. The GPS will also be used to document any soil sample locations that may need to be re- located from their pre-staked locations.

4.2 Sampling

The following sections identify the proposed sample locations. Sampling protocols will be provided in the QAPP Addendum. While the sampling effort is primarily focused on PCBs, samples (surface soil samples, subsurface soil samples, and sediment samples) will be screened with a photoionization detector (PID) for the potential presence of volatile organic compounds (VOCs). In the event of a PID reading greater than 1 ppm above background levels, additional soil samples will be collected for VOCs.

4.2.1 Surface Soil Sampling

Surface soil samples are proposed to be collected from 36 locations. As described above, historic sampling indicates that PCBs have not been detected deeper than the initial 1-foot interval in these areas. The objective of this sampling is to delineate the lateral extent of impacted material around five historic locations (SM-6, SSMR-33, SM-4, S-333, and S-342). Additional locations are proposed along the western and eastern banks of Turtle Creek (at sediment sample transects) to supplement prior sample results.

The samples are proposed to be collected from a depth of 0 to 1 foot and 1 to 2 feet below the vegetative cover, using a combination of hand and direct push-sampling techniques. Where the Geoprobe can access locations, the samples will be collected using a Macro-Core®-type sampler with disposable liners. In those areas where the ground surface is too soft for a Geoprobe, the samples will be collected using hand augers or other manual means. The collected samples will be analyzed for PCBs. As described in the section above, all samples will be screened for VOCs using a PID and a sample collected and analyzed for VOCs if PID readings of more than 1 ppm above background are observed.

4.2.2 Subsurface Soil Sampling

A total of twenty-one soil borings are proposed to be completed (**Figure 1**) using direct push methods and a Macro-Core®–type sampler fitted with disposable liners. Two strategies have been identified for these borings as described below.

For the seven soil borings along the western Saint Regis Mohawk Reservation Land property boundary, soil samples will be collected continuously to the base of each boring (12 ft below grade) to evaluate any potential impacts from the RCRA-capped industrial landfill at the Site in this area of undisturbed soil. Soil samples collected from each boring will be segregated into 1-ft intervals for analysis. In the event that sufficient recovery is not obtained for sample intervals, a second attempt at collection of the sample interval will be made in an adjacent location. Samples will be analyzed for PCBs. If a fill material layer is identified, one sample will be collected from this layer and analyzed additionally for phenols at each boring location. As described in the section above, all samples will be screened for VOCs using a PID and a sample collected and analyzed for VOCs if readings greater than 1 ppm above background are observed.

The remaining fourteen soil borings are located in an area reported to have received fill from the former GM facility. A top layer of soil was subsequently understood to have been placed by the property owner on top of the fill. At these locations soil samples will be collected continuously to 2 ft below the top of native material. Soil samples will be collected for PCB analysis as follows:

- 1-ft intervals to the top of fill
- 2-ft composite intervals from fill material

- 1-ft below top of native material
- A contingency sample from the 1-2 ft interval below the fill/native interface

One sample will be collected from the fill material (assuming fill material is encountered) and analyzed additionally for phenols at each boring location. As described in the section above, all samples will be screened for VOCs using a PID and a sample collected and analyzed for VOCs if PID readings greater than 1 ppm above background are observed.

4.2.3 Sediment Sampling

A total of 41 sediment sampling locations are proposed as shown in **Figure 1**. Sampling transects, spaced approximately 100 feet apart, are proposed within Turtle Creek Pond. Samples will be collected approximately every 50 feet laterally along each transect. An additional sediment sample is proposed in the creek that connects to the smaller body of water north of Turtle Creek Pond as well as a single transect containing two samples within that smaller water body.

Based on October 1, 2019 observations by AECOM, soft sediment was observed to be a maximum of 2.1-feet thick. Therefore, sediment cores are proposed to be collected to a depth of up to 4 feet, in order to characterize soft sediment and the upper two feet of native material, to the extent possible as the density of the material may limit penetration. Sediment from the 0 to 0.5-ft interval, 0.5 to 1.0-ft interval, 1.0 to 1.5-ft interval, and 1.5 to 2.0-ft interval, to the top of native material (*i.e.,* the bottom of soft sediment) will initially be submitted for analysis. Additionally, if practicable, 1-ft composite samples will be collected from the upper foot of native material and analyzed. To the extent practicable, a second 1-ft composite sample will be collected from 1 to 2-ft below the top of the native material and held at the lab for contingency analysis pending results from the upper foot of native material. Sediment samples will be analyzed for PCBs. As described in the section above, samples will be screened for VOCs using a PID and analyzed for VOCs if PID readings greater than 1 ppm above background are observed.

The sampling will be performed using a Macro-Core® equipped with disposable liners and direct-push methods (*e.g.,* a Geoprobe slide hammer and 2 or 4-ft-long MC5 sample barrel) from a flat-bottom boat or wading as appropriate for the water depth at the core location. The thickness of soft sediment and depth of water column will be recorded on the sampling logs and reported in the data summary report.

4.2.4 Analytical Summary Table

Table 1 summarizes the proposed samples described above and presented on **Figure 1**. The actual number of samples collected may be different based on actual sample recoveries due to field conditions.

Table 1 – Proposed Sample Summary

Sample Type	Number of Locations	Depth Per location	Number of Samples[1, 5]	Sampling Strategy for Analysis
Surface Soil	36	2 feet	72 PCBs 12 QAQC	0-1 ft and 1-2 ft
Soil Boring	7	12 feet	84 PCBs 15 QAQC 7 Phenols[4]	1-ft increments
Soil Boring	14	2 ft below top of native (assume a maximum 12 ft depth)	112 PCBs[2] 18 QAQC 14 Phenols	1-ft increments to top of fill, 2-ft increments of fill, 0-1-ft interval below top of native, 1-2-ft interval below top of native (contingency sample)
Sediment	41	2-4 feet	225 PCBs[3] 36 QAQC	0-0.5-ft, 0.5-1.0-ft, 1.0-1.5-ft, 1.5-2.0-ft[3], and subsequent 1-ft intervals of soft sediment to the top of native material, 0-1-ft interval below top of native, 1-2-ft interval below top of native (contingency sample)
Total			**493 PCBs** **81 QAQC** **21 phenols**	

[1] Approximate sample counts include quality control/quality assurance samples described in the section Sample Analysis below. Potential samples for VOCs are not included in the sample counts.
[2] Sample number assumes that four samples will be collected above the fill plus two 2-ft composites of the fill and two native samples from below the fill will be collected at these locations.
[3] Sample number assumes half of the locations will have three six-inch intervals of soft sediment material and half will have four six-inch intervals of soft sediment material.
[4] Though accounted for in the sample count, the seven phenol samples are not anticipated to be collected because fill material is not anticipated to be present at the landfill and property boundary.
[5] Sample count does not include potential VOC sample analyses. The number of VOC analyses will be based on PID readings.

4.3 Decontamination

Decontamination will take place on-site. Decontamination of the Macro-Core® samplers as well as other reusable sampling equipment (hand augers, shovels) will be completed using non-phosphate detergent (*e.g.,* alconox® or simple green®) bucket wash and potable water rinse. A small trough or buckets will be used to contain the water used for this purpose.

4.4 Study Area Restoration

To the extent possible, Geoprobe and vehicle traffic will be minimized to avoid rutting and surface damage. In areas where rutting or surface damage results from sampling-related activity, the ruts will be repaired, and the ground will be covered with topsoil and seeded. Boreholes will be filled after sample collection using bentonite chips.

4.5 Waste Handling

The field activities will produce investigative-derived waste (IDW), which will require appropriate management. IDW includes the following:

- Residual soil volume
- Decontamination water
- Personnel protective equipment (PPE), disposable sampling supplies, Macro-Core® liners, Lexan tubing, and associated debris resulting from the execution of field activities, and

- General refuse.

The IDW will be contained in 55-gallon drums and transported to an on-Site temporary staging area. The drums will be labeled with the contents. Water generated during decontamination will be contained and transported to be treated at RACER Trust's permitted groundwater treatment plant.

One composite sample of the residual soil volume will be collected for disposal characterization analysis as follows: Toxicity characteristic leaching procedure (TCLP) volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and Metals, total PCBs, ignitability, corrosivity, and reactivity. The final disposition of the IDW will be identified after the various analytical results from the investigation are available.

4.6 Sample Analysis

The soil and sediment samples will be analyzed for PCBs as Aroclors using USEPA Method 8082A as displayed in **Table 2**. If collected, samples for VOCs and phenols will be analyzed using USEPA Method 8260C and 9065, respectively.

Table 2 – 80882A Method Detection Limits

PCB Aroclor	Method Detection Limit 8082A (soil) [mg/kg]	Method Detection Limit 8082A[1] (sediment) [mg/kg]
Aroclor 1016	0.0489	0.00326
Aroclor 1221	0.0489	0.00326
Aroclor 1232	0.0489	0.00326
Aroclor 1242	0.0489	0.00326
Aroclor 1248	0.0489	0.00326
Aroclor 1254	0.117	0.00782
Aroclor 1260	0.117	0.00782

[1] For sediment sample analyses, the reporting limit and method detection limit are lower than for soil sample analyses because 30 grams of sediment sample will be utilized during the 3550 ultrasonic extraction preparation rather than the typical 2 grams that would be used for the soil sample analyses.

Source: Eurofins TestAmerica

For quality assurance/quality control purposes, duplicates, matrix spike and matrix spike duplicate samples will be collected at a frequency of 1 per 20 soil samples. Samples will be analyzed using a standard turnaround time.

Laboratory method detection limits will be sufficiently low to meet the target detection limit for each PCB Aroclor to allow for comparison to a 1 mg/kg clean up objective for soils and 0.1 mg/kg for sediment. At least 10% of the analytical data results will be validated by an independent data validator, who will prepare a data usability summary report.

5. SCHEDULE

RACER appreciates the USEPA's ongoing efforts to secure access from the owners/residents of the properties on which this sampling is proposed. We are working toward beginning this sampling in April 2021. We will continue communicating our schedule progress to you and confirm the schedule within 10 business days of sampling start-up, such that USEPA can schedule oversight it intends to provide. Upon completion of the sample collection, analysis, and validation, RACER will provide the USEPA, NYSDEC and Saint Regis Mohawk Tribe with tables that summarize the data, figures that summarize the sample results, thickness of soft sediment and water depth, and the laboratory reports.

6. REFERENCES

Arcadis. 2010. *Quality Assurance Project Plan*. RACER Trust, Central Foundry Superfund Site, Massena, New York. December.

Arcadis. 2016. *Quality Assurance Project Plan*. RACER Trust, Central Foundry Superfund Site, Massena, New York. December.

Arcadis. 2019. *Quality Assurance Project Plan*. RACER Trust, Central Foundry Superfund Site, Massena, New York. December.

BBL Environmental Services, Inc (BBLES) and Hughes Environmental Systems, Inc. 1993. *Comprehensive Sampling and Analysis Plan Quality Assurance Project Plan, Volume II*

BBLES. 2006. *Mohawk Upland Area Soils and Sediment Sampling Plan*, General Motors Central Foundry Division Superfund Site Massena, New York. July 2006.

BBLES. 2008. *Mohawk Upland Area Remedial Action Completion Report,* General Motors Central Foundry Division Superfund Site Massena, New York. February 2008.

FIGURE 1
PROPOSED SAMPLE LOCATIONS

ATTACHMENT 1
TABLE 1 – HISTORICAL SOIL PCB ANALYTICAL RESULTS

Table 1
Historical Soil PCB Analytical Results
Mohawk Upland Area
US EPA Method 8082 SW846

#	Sample Location ID	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Total PCBs (mg/kg)
1	SSMR-1	< 0.08	< 0.08	< 0.08	< 0.08	5.9	< 0.16	< 0.16	5.9
2	SSMR-2	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.16	< 0.16	U
3	SSMR-3	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.16	< 0.16	U
4	SSMR-4	< 0.08	< 0.08	< 0.08	< 0.08	0.11	< 0.16	< 0.16	0.11
5	SSMR-5	< 0.08	< 0.08	< 0.08	< 0.08	0.27	< 0.16	< 0.16	0.27
6	SSMR-6	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.16	< 0.16	U
7	SSMR-7	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.16	< 0.16	U
8	SSMR-8	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.16	< 0.16	U
9	SSMR-9	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.16	< 0.16	U
10	SSMR-10	< 0.08	< 0.08	< 0.08	< 0.08	0.21	< 0.16	< 0.16	0.21
11	SSMR-11	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.16	< 0.16	U
12	SSMR-12	< 0.08	< 0.08	< 0.08	< 0.08	0.22	< 0.16	< 0.16	0.22
13	SSMR-13	< 0.08	< 0.08	< 0.08	< 0.08	0.25	< 0.16	< 0.16	0.25
14	SSMR-14	< 0.08	< 0.08	< 0.08	< 0.08	0.30	< 0.16	< 0.16	0.30
15	SSMR-15	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.16	< 0.16	U
16	SSMR-16	< 0.08	< 0.08	< 0.08	< 0.08	1.3	< 0.16	< 0.16	1.3
17	SSMR-17	< 0.08	< 0.08	< 0.08	< 0.08	1.3	< 0.16	< 0.16	1.3
18	SSMR-18	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.16	< 0.16	U
19	SSMR-19	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.16	< 0.16	U
20	SSMR-20	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.16	< 0.16	U
21	SSMR-21	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.16	< 0.16	U
22	SSMR-23	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.16	< 0.16	U
23	SSMR-24	< 0.08	< 0.08	< 0.08	< 0.08	0.23	< 0.16	< 0.16	0.23
24	SSMR-25	< 0.08	< 0.08	< 0.08	< 0.08	6.8	< 0.16	< 0.16	6.8
25	SSMR-26	< 0.08	< 0.08	< 0.08	< 0.08	0.21	< 0.16	< 0.16	0.21
26	SSMR-27	< 0.08	< 0.08	< 0.08	< 0.08	9.0	< 0.16	< 0.16	9.0
27	SSMR-28	< 0.08	< 0.08	< 0.08	< 0.08	0.17	< 0.16	< 0.16	0.17
28	SSMR-29	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.16	< 0.16	U
29	SSMR-30	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.16	< 0.16	U
30	SSMR-31	< 0.08	< 0.08	< 0.08	< 0.08	0.11	< 0.16	< 0.16	0.11
31	SSMR-33	< 0.08	< 0.08	< 0.08	< 0.08	2.8	< 0.16	< 0.16	2.8
32	SSMR-34	< 0.08	< 0.08	< 0.08	< 0.08	0.30	< 0.16	< 0.16	0.30
33	SSMR-35	< 0.08	< 0.08	< 0.08	< 0.08	0.21	< 0.16	< 0.16	0.21
34	SSMR-36	< 0.08	< 0.08	< 0.08	< 0.08	0.55	< 0.16	< 0.16	0.55
35	SSMR-37	< 0.08	< 0.08	< 0.08	< 0.08	0.61	< 0.16	< 0.16	0.61
36	SSMR-38	< 0.08	< 0.08	< 0.08	< 0.08	0.16	< 0.16	< 0.16	0.16
37	SSMR-39	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.16	< 0.16	U
38	SSMR-40	< 0.08	< 0.08	< 0.08	< 0.08	0.08	< 0.16	< 0.16	0.08
39	SSMR-41	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.16	< 0.16	U
40	SSMR-42	< 0.08	< 0.08	< 0.08	< 0.08	0.11	< 0.16	< 0.16	0.11

Table 1
Historical Soil PCB Analytical Results
Mohawk Upland Area
US EPA Method 8082 SW846

#	Sample Location ID	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Total PCBs (mg/kg)
41	SSMR-43	< 0.08	< 0.08	< 0.08	< 0.08	0.67	< 0.16	< 0.16	0.67
42	SSMR-44	< 0.08	< 0.08	< 0.08	< 0.08	0.47	< 0.16	< 0.16	0.47
43	SSMR-45	< 0.08	< 0.08	< 0.08	< 0.08	0.33	< 0.16	< 0.16	0.33
44	SSMR-46	< 0.08	< 0.08	< 0.08	< 0.08	0.62	< 0.16	< 0.16	0.62
45	SSMR-47	< 0.08	< 0.08	< 0.08	< 0.08	0.81	< 0.16	< 0.16	0.81
46	SSMR-48	< 0.08	< 0.08	< 0.08	< 0.08	1.0	< 0.16	< 0.16	1.0
47	SSMR-49	< 0.08	< 0.08	< 0.08	< 0.08	1.3	< 0.16	< 0.16	1.3
48	SSMR-50	< 0.08	< 0.08	< 0.08	< 0.08	1.1	< 0.16	< 0.16	1.1
49	SSMR-51	< .110	< .110	< .110	< .110	0.840	< .220	< .220	0.840
50	SSMR-52	< .100	< .100	< .100	< .100	0.290	< .210	< .210	0.290
51	SSMR-53	< .120	< .120	< .120	< .120	0.360	< .240	< .240	0.360
52	SSMR-54	< .097	< .097	< .097	< .097	0.800	< .190	< .190	0.800
53	SSMR-55	< .120	< .120	< .120	< .120	0.590	< .240	< .240	0.590
54	SSMR-56	< .082	< .082	< .082	< .082	0.140	< .160	< .160	0.140
55	SSMR-57	< .120	< .120	< .120	< .120	0.120	< .250	< .250	0.120
56	SSMR-58	< .170	< .170	< .170	< .170	0.280	< .330	< .330	0.280
57	SSMR-62	< .130	< .130	< .130	< .130	< .130	< .260	< .260	U
58	SSMR-63	< .120	< .120	< .120	< .120	< .120	< .230	< .230	U
59	SSMR-64	< .120	< .120	< .120	< .120	< .120	< .230	< .230	U
60	SSMR-65	< .140	< .140	< .140	< .140	3.300	< .290	< .290	3.300
61	SSMR-66	< .110	< .110	< .110	< .110	< .110	< .210	< .210	U
62	SSMR-67	< .130	< .130	< .130	< .130	< .130	< .260	< .260	U
63	SSMR-68	< .170	< .170	< .170	< .170	< .170	< .340	< .340	U
64	SSMR-69	< .120	< .120	< .120	< .120	< .120	< .230	< .230	U
65	SSMR-70	< .120	< .120	< .120	< .120	0.120	< .240	< .240	U
66	SSMR-71	< .110	< .110	< .110	< .110	< .110	< .220	< .220	U
67	SSMR-72	< .210	< .210	< .210	< .210	< .210	3.600	< .410	3.600
68	SSMR-73	< .097	< .097	< .097	< .097	< .097	< .190	< .190	U
69	SSMR-74	< .120	< .120	< .120	< .120	< .120	< .230	< .230	U
70	SSMR-75	< .091	< .091	< .091	< .091	< .091	< .180	< .180	U
71	S-331 (0-1)	< 0.05	< 0.10	< 0.05	< 0.06	< 0.12	< 0.05	< 0.06	U
72	S-331 (1-2)	< 0.05	< 0.09	< 0.05	< 0.05	< 0.11	< 0.05	< 0.06	U
73	S-332 (0-1)	< 0.47	< 0.95	< 0.47	< 0.57	1.7	< 0.47	< 0.58	1.7
74	S-332 (1-2)	< 0.04	< 0.09	< 0.04	< 0.05	< 0.11	< 0.04	< 0.06	U
75	S-333 (0-1)	< 0.41	< 0.82	< 0.41	< 0.48	3.9	< 0.41	< 0.48	3.9
76	S-333 (1-2)	< 0.05	< 0.10	< 0.05	< 0.06	0.00	< 0.05	< 0.06	U
77	S-334 (0-1)	< 0.05	< 0.10	< 0.05	< 0.06	0.15	< 0.05	< 0.06	0.15
78	S-334 (1-2)	< 0.04	< 0.09	< 0.04	< 0.05	0.00	< 0.04	< 0.05	U
79	S-335 (0-1)	< 0.05	< 0.10	< 0.05	< 0.06	0.00	< 0.05	< 0.06	U
80	S-335 (1-2)	< 0.04	< 0.09	< 0.04	< 0.05	0.00	< 0.04	< 0.05	U

Table 1
Historical Soil PCB Analytical Results
Mohawk Upland Area
US EPA Method 8082 SW846

#	Sample Location ID	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Total PCBs (mg/kg)
81	S-337 (0-1)	< 0.05	< 0.11	< 0.05	< 0.07	0.18	< 0.05	< 0.07	0.18
82	S-337 (1-2)	< 0.04	< 0.08	< 0.04	< 0.05	< 0.11	< 0.04	< 0.05	U
83	S-338 (0-1)	< 0.06	< 0.12	< 0.06	< 0.07	0.16	< 0.06	< 0.07	0.16
84	S-338 (1-2)	< 0.04	< 0.09	< 0.04	< 0.05	< 0.11	< 0.04	< 0.06	U
85	S-342 (0-1)	< 0.27	< 0.54	< 0.27	< 0.32	3.03	< 0.27	< 0.33	3.03
86	S-342 (1-2)	< 0.04	< 0.09	< 0.04	< 0.05	0.13	< 0.04	< 0.06	0.13
87	S-343 (0-1)	< 0.55	< 1.10	< 0.55	< 0.66	4.5	< 0.55	< 0.68	4.5
88	S-343 (1-2)	< 0.05	< 0.10	< 0.05	< 0.06	< 0.13	< 0.05	< 0.06	U
89	S-344 (0-1)	< 0.27	< 0.54	< 0.27	< 0.32	1.74	< 0.27	< 0.33	1.74
90	S-344 (1-2)	< 0.04	< 0.08	< 0.04	< 0.05	< 0.11	< 0.04	< 0.05	U
91	S-345 (0-1)	< 0.05	< 0.10	< 0.05	< 0.06	< 0.12	< 0.05	< 0.06	U
92	S-345 (1-2)	< 0.04	< 0.09	< 0.04	< 0.05	0.39	< 0.04	< 0.05	0.39
93	S-346 (0-1)	< 0.04	< 0.08	< 0.04	< 0.05	< 0.10	< 0.04	< 0.05	U
94	S-346 (1-2)	< 0.04	< 0.08	< 0.04	< 0.05	< 0.10	< 0.04	< 0.05	U
95	S-347 (0-1)	< 0.04	< 0.09	< 0.04	< 0.05	< 0.11	< 0.04	< 0.05	U
96	S-347 (1-2)	< 0.04	< 0.08	< 0.04	< 0.05	< 0.10	< 0.04	< 0.05	U
97	S-348 (0-1)	< 0.05	< 0.11	< 0.05	< 0.06	< 0.13	< 0.05	< 0.07	U
98	S-348 (1-2)	< 0.04	< 0.08	< 0.04	0.44	< 0.10	< 0.04	< 0.05	0.44
99	S-349 (0-1)	< 0.04	< 0.09	< 0.04	< 0.05	< 0.11	< 0.04	< 0.05	U
100	S-349 (1-2)	< 0.04	< 0.08	< 0.04	< 0.05	< 0.10	< 0.04	< 0.05	U
101	S-350 (0-1)	< 7.40	< 15.0	< 7.40	< 9.0	49	< 7.40	< 9.20	49
102	S-350A (1-2)	< 7.40	< 15.0	< 7.40	< 9.0	48	< 7.40	< 9.20	48
103	S-352 (0-1)	< 0.05	< 0.10	< 0.05	< 0.06	< 0.13	< 0.05	< 0.06	U
104	S-352 (1-2)	< 0.04	< 0.08	< 0.04	< 0.05	< 0.10	< 0.04	< 0.05	U
105	S-353 (0-1)	< 0.20	< 0.41	< 0.20	< 0.24	1.11	< 0.20	< 0.25	1.11
106	S-353 (1-2)	< 0.19	< 0.38	< 0.19	< 0.22	1.35	< 0.19	< 0.24	1.35
107	SM-3	< 0.08	< 0.08	< 0.08	< 0.08	5.1	< 0.16	< 0.16	5.1
108	SM-4	< 1.2	< 1.2	< 1.2	< 1.2	22	< 2.4	< 2.4	22
109	SM-5	< 0.08	< 0.08	< 0.08	< 0.08	0.39	< 0.16	< 0.16	0.39
110	SM-6	< 0.08	< 0.08	< 0.08	< 0.08	1.3	< 0.16	< 0.16	1.3
111	SM-8	< .170	< .170	< .170	< .170	0.830	< .340	< .340	0.830

Note: Historical analytical data from the 1986/89 RMT - Draft Feasibility Study for the RI/FS at GM-CFD Facility, Massena, NY Phase I & II; and the 1993 ERM Sum. Rpt # 7 - SRMT Property Soil Probe Report.

Note 2: highlighted samples addressed by excavation and removal.

Table 2
Historical Sediment PCB Analytical Results
Mohawk Uplands Area
US EPA Method 8082 SW846

#	Sample Location ID	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Total PCBs (mg/kg)
1	SM-1	< 1.2	< 1.2	< 1.2	< 1.2	48	< 2.4	< 2.4	48
2	SM-2	< 0.08	< 0.08	< 0.08	< 0.08	3.5	< 0.16	< 0.16	3.5
3	SM-7	< 0.120	< 0.120	< 0.120	< 0.120	< 0.120	< 0.240	< 0.240	U
4	SM-10	< .140	< .140	< .140	< .140	< .140	< .270	< .270	U
5	SSMR-22	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.16	< 0.16	U
6	SSMR-32	< 0.08	< 0.08	< 0.08	< 0.08	4.3	< 0.16	< 0.16	4.3
7	SSMR-60	< .130	< .130	< .130	< .130	< .130	< .260	< .260	U
8	S-336 (0-0.8)	< 0.04	< 0.09	< 0.04	< 0.05	< 0.11	< 0.04	< 0.05	U
9	S-336R (0.8-1.6)	< 0.04	< 0.09	< 0.04	< 0.05	< 0.05	< 0.04	< 0.05	U
10	S-341R (0-0.7)	< 0.19	< 0.38	< 0.19	< 0.10	1.26	< 0.19	< 0.24	1.26
11	S-341 (0.7-1.3)	< 0.04	< 0.08	< 0.04	< 0.05	< 0.11	< 0.04	< 0.05	U
12	S-351 (0-1)	< 0.13	< 0.27	< 0.13	< 0.16	0.48	< 0.13	< 0.17	0.48
13	S-351 (1-2)	< 0.05	< 0.10	< 0.05	< 0.06	< 0.12	< 0.05	< 0.06	U

Note: Historical analytical data from the 1986/89 RMT - Draft Feasibility Study for the RI/FS at GM-CFD Facility, Massena, NY Phase I & II; and the 1993 ERM Sum. Rpt # 7 - SRMT Property Soil Probe Report.

Note 2: highlighted samples addressed by excavation and removal.